

Trends in Rural Pennsylvania

March/April 2003

About Trends in Rural Pennsylvania

This fact sheet is the second in a series of nine that examine trends in rural Pennsylvania. Each fact sheet focuses on a specific area of interest, and is based on the mandates outlined in the Center for Rural Pennsylvania's enabling legislation (Act 16 of 1987). The areas of interest are agriculture, economic development, local government capacity and fiscal stress indicators, transportation, sociodemographics, health care and human services, the environment and natural resources, education and the condition of existing local infrastructure.

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The Center for Rural Pennsylvania is a bipartisan, bicameral legislative agency that serves as a resource for rural policy within the Pennsylvania General Assembly. It was created in 1987 under Act 16, the Rural Revitalization Act, to promote and sustain the vitality of Pennsylvania's rural and small communities.

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Transportation: The Road Rules

Introduction

The automobile is the dominant means of transportation in Pennsylvania's rural counties. In 2000, the state's 42 predominantly rural counties encompassed more than 57,000 miles of highway, an increase of more than 100 miles since 1990. These same rural counties are home to 1.9 million licensed drivers and 2.4 million registered vehicles.

Driving is becoming increasingly important to rural Pennsylvanians. While the general population of those aged 16 and older increased by 7 percent between 1990 and 2000, the number of licensed drivers increased by 8 percent and the number of registered vehicles increased by 21 percent. At the same time, highway miles grew by a fraction of 1 percent but daily vehicle miles of travel (DVMT) climbed 22 percent. These changes are much more significant than in urban counties.

Selected Transportation Statistics

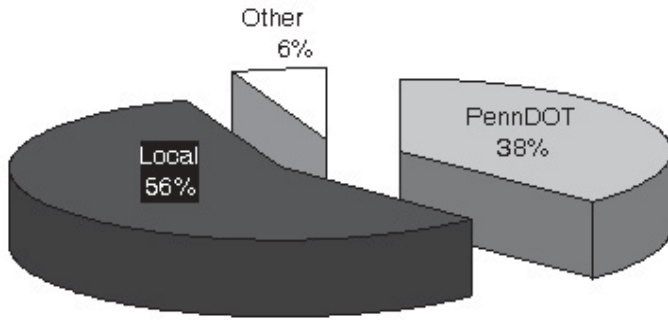
	Pennsylvania	Rural counties	Urban counties
Population aged 16 and older, 2000	9,693,987	2,058,805	7,635,182
Percent change 1990-2000	3.2%	7.4%	2.1%
Licensed drivers, 2000	8,229,493	1,857,000	6,347,502
Percent change 1990-2000	6.0%	8.3%	4.9%
Percent of 16+ population with license, 2000	84.9%	90.2%	83.1%
Registered vehicles, 2000	10,085,392	2,426,233	7,244,634
Percent change 1990-2000	16.8%	20.9%	11.5%
DVMT on PennDOT roads, 2000*	213,307,541	61,455,082	151,852,459
Percent change 1990-2000	18.1%	21.8%	16.7%
Miles of highway, 2000	119,643	57,065	62,577
Percent change 1990-2000	2.7%	0.2%	5.1%
Percent of population who commute to work by driving alone, 2000	77%	80%	76%

* DVMT on non-PennDOT roads was not collected until 1994

Highway miles

Ownership of rural Pennsylvania's more than 57,000 linear miles of highway is divided primarily between the Pennsylvania Department of Transportation (PennDOT) and local municipalities with turnpike, toll bridge, and other agencies

Rural Pennsylvania Highway Miles by Jurisdiction, 2000



also in the mix. The majority is locally owned and maintained but PennDOT owns and maintains more than one-third of all roads.

In 2000, highways in the commonwealth's rural counties supported 76.7 million daily vehicle miles of travel. This amounts to about 1,344 vehicles daily per mile of highway. About 80 percent of these miles are traveled on PennDOT highways.

Of course not all road miles are improved highways. Nearly 2,000 miles of rural roadway owned by municipalities and PennDOT are unpaved or dirt roads. This does not include dirt roads owned by other agencies such as the Bureau of Forestry in the Department of Conservation and Natural Resources.

Municipal governments are responsible for maintaining local roads, and they spend varying amounts on this endeavor. In 2000, municipalities in rural counties spent \$226.6 million on streets and roads. This figure accounts for nearly 10 percent of total municipal expenditures. Meanwhile, urban counties spent just 5 percent of expenditures on streets and roads. Much of the cost of local road maintenance is provided for by Liquid Fuels Taxes. Municipalities other than counties receive an annual allocation of Liquid Fuels Taxes from the State's Motor License Fund. This allocation is based on the mileage and population of the municipality and the revenues must be used on the roads and streets for which the municipalities are responsible.

Municipalities in rural counties received \$76.8 million in Liquid Fuels money in 2000. In addition, rural county governments received \$7.3 million,

much of which is passed on to municipalities.

Licensed Drivers

Driving is a rural fact of life. Ninety percent of rural residents aged 16 and older have a driver's license.

This compares to 83 percent of urban residents. Both rural and urban percentages increased slightly since 1990. Not only are a greater percentage of qualified residents licensed in rural areas, but they drive more as well. The average licensed driver in rural Pennsylvania drove more than 41 miles a day in 2000 compared to 32 miles for urban drivers.

Vehicle Type

Although automobiles are the most common type of vehicle for rural residents (93 percent of licenses were to operate an automobile), they are not the only type. Of the 1.8 million rural licensed drivers, nearly 20 percent had multiple types of licenses. This could include motorcycle, commercial vehicle, or even school bus licenses.

Trucks are popular in rural counties. There were 2.4 million vehicles registered in rural counties in 2000: 62 percent were passenger vehicles and 34 percent were trucks and trailers, which

range from pickup trucks to semis. In urban counties, 74 percent of registered vehicles were passenger vehicles and 23 percent were trucks and trailers.

Vehicle ownership

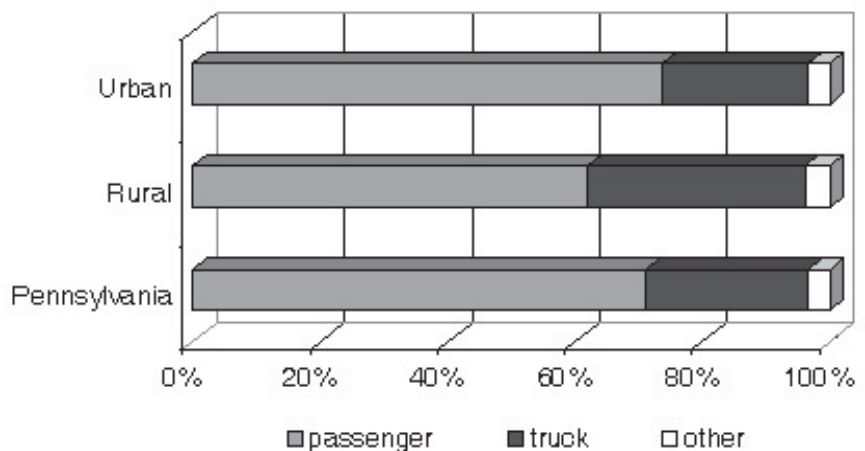
Vehicle ownership, which includes leasing, is on the rise in rural Pennsylvania. In 1990, there were 1.17 vehicles per licensed driver. Throughout the decade, that number grew to reach 1.31 vehicles per driver in 2000. Census data from 2000 shows that only 8 percent of rural households had no vehicle while 41 percent had two and 19 percent had three or more. A decade earlier, 10 percent had no vehicle while 40 percent had two and 12 percent had three or more.

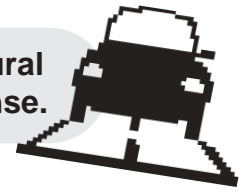
All these factors add up to an increased demand on rural roadways. The driving age population is increasing and the number of drivers is growing even faster. Meanwhile, drivers have more vehicles and drive more miles. On the other hand, miles of highway are not increasing as rapidly.

Commuting patterns

Commuting patterns derived from 2000 Census data show that, in 1990, fewer than 74 percent of rural workers drove alone to work; in 2000, the percent of lone drivers rose to 80. Accordingly, carpooling dropped from 15 to 11 percent and walking to work fell from 6 to 4 percent. In both Censuses, between 3 and 4 percent worked from home and fewer than 2 percent took public

Vehicle Registrations by Type in Pennsylvania and Rural and Urban Counties, 2000





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transportation or other means such as bicycles or motorcycles.

The average rural Pennsylvania resident commuted 25 minutes to work in 2000, up from 20 minutes in 1990.

Crash Stats

With all this driving come accidents. Crash statistics from PennDOT show 32,433 crashes in rural counties for the year 2000 and nearly 500 traffic related fatalities. Crashes, which include incidents with injuries or deaths (within 30 days of the incident) or when a vehicle must be towed, have increased since 1990 when there were just over 30,000 crashes. However, since more people are driving, there are approximately the same number of crashes per licensed driver or about 17.5 crashes per 1,000 licensed drivers.

Although crashes increased during this 10-year period, fewer were fatal with a decrease of 14 percent. Fatalities per 1,000 crashes decreased from about 19 to 15 during those 10 years. One reason for this change may be that seat belt use became more prominent. Statewide, 65 percent of people wear seatbelts compared to less than 55 percent in 1990. Already, seatbelts are far more popular in rural counties than in urban counties. The five counties with the lowest seatbelt use are urban - Philadelphia is at the bottom with 20 percent usage followed by Beaver at 49 percent. Seven counties have 80 percent or higher usage and all are rural. Additionally, the six counties whose usage increased by the greatest number of percentage points were rural.

Many crashes can be attributed to either alcohol or speeding. Of the 491 rural traffic fatalities in 2000, 185 or 38 percent were alcohol related. In the same year, the Pennsylvania State Police issued 97,762 citations for speeding in rural counties. This figure accounts for 43 percent of the state total of speeding citations, although only 23 percent of licensed drivers are located in rural counties. On average, almost one in 20 rural drivers received a speeding citation while in urban areas the figure was one in 63.

Crash statistics alone cannot show a

complete picture of the prevalence of drunk driving. In 2000, the State Police Uniform Crime Report shows nearly 9,000 DUI (Driving Under the Influence) arrests in rural counties. DUI included drivers under the influence of alcohol or narcotics. Per capita, the rural and urban DUI rates are about equal; rural DUI occurred at 34 per 10,000 population and urban DUI occurred at 33 per 10,000.

Bus systems

Two types of public bus systems run in rural Pennsylvania and both are funded in part by PennDOT. Twenty-one rural and small urban bus systems cover at least parts of 26 counties, 20 of which are predominantly rural. Twenty-two predominantly rural counties have no funded bus service.

In the 2000-2001 fiscal year, public bus systems transported 3.7 million passengers traveling 6.1 million vehicle miles. There were 165 vehicles in use at peak hours. These figures represent interesting changes in service from 1990-1991 when there were 4 million passengers, 4.6 million vehicle miles traveled, and 155 peak hour vehicles. Over the 10-year period, ridership decreased by 8 percent while travel and the number of buses operating increased by 34 percent and 7 percent respectively. Five intercity bus systems also service Pennsylvania but no statistics were accessible at the time of this publication.

Air travel

Although the automobile is the dominant mode of transportation in the commonwealth, there are other ways to get around. While no information was available on air ridership, the Center has reported that, in 1999, there were 55 public airports in the state's rural counties. This figure is fewer in number but more per capita than in urban counties. Rural Pennsylvania had over 3,900 active licensed pilots in 1998. For more rural airport information, see the 2001 Center for Rural Pennsylvania fact sheet on rural airports.

Rail systems

Rail transportation, both passenger and freight, is important to the commonwealth. Pennsylvania is served by all three major eastern railroad systems and 70 regional and short-line railroads, more than any other state. The second group ranges from short-lines that operate on a few miles of track within a single county to major regional systems serving as many as 12 counties. The commonwealth has about 5,600 miles of rail line. Only a few counties have none. According to the Association of American Railroads (AAR), the majority of track (61 percent) is part of the three major systems. About 10 percent belongs to the four regional systems and the balance is part of 24 local railroads and switching terminals.

AAR data also show that freight rail carried 190.5 tons of cargo, which amounted to more than 4.1 million carloads. Coal accounted for about half of this freight.

There are more than 15,000 rail employees in Pennsylvania, 60 percent of whom are employed by freight rail.

Amtrak data show that 119 passenger trains operate daily in Pennsylvania, excluding commuter systems. Ridership in the state was nearly 4.8 million in 2001. Only a few of the stations on these lines are in rural counties.

As on highways, rail traffic leads to accidents. In the year 2000, rural counties experienced 22 train accidents in which no one died but 4 people were injured. A decade earlier in 1990, there were 14 train accidents also with no deaths and 4 injuries. Accidents also occur where rail and road meet. Rural highway crossing accidents (counted separately from train accidents) numbered 10 in 2000 where there were two deaths and three injuries. In 1990, there were 40 such accidents in which there were two deaths and 15 injuries. There was no steady rise or fall in either accident category. Both sets of numbers fluctuate from year to year.

Road Transportation Statistics by County, 2000

	Licensed Drivers	Registered Vehicles	Daily Miles Traveled per Registered Vehicle	Vehicle Crashes	Mean Travel Time to Work (minutes)
Pennsylvania	8,229,493	10,085,392	27.8	147,253	25.2
Rural	1,857,000	2,426,233	31.6	32,433	25.0
Urban	6,347,502	7,244,634	28.1	114,820	25.2
Adams	62,925	85,084	26.6	1,028	25.1
Allegheny	842,465	899,351	28.0	13,850	25.3
Armstrong	58,519	75,256	23.6	755	26.9
Beaver	124,224	141,410	27.9	1,905	24.5
Bedford	36,258	50,371	55.7	837	27.9
Berks	251,583	320,041	26.3	5,418	22.3
Blair	92,313	109,757	26.0	1,762	20.2
Bradford	45,205	59,211	24.3	698	22.6
Bucks	436,487	465,016	27.8	7,647	28.6
Butler	129,704	206,859	22.5	2,113	25.3
Cambria	108,341	129,103	24.5	1,508	21.9
Cameron	4,319	5,311	38.2	67	15.4
Carbon	44,538	57,850	32.9	793	29.2
Centre	80,367	95,874	40.9	1,578	19.6
Chester	285,566	324,391	33.7	5,390	27.5
Clarion	28,001	36,888	47.5	665	22.9
Clearfield	57,285	74,381	40.6	1,078	24.3
Clinton	24,831	31,770	53.9	508	23.5
Columbia	46,747	61,331	29.6	843	21.1
Crawford	61,473	76,997	30.3	1,106	21.5
Cumberland	164,133	210,495	34.3	2,529	20.5
Dauphin	174,487	251,730	31.8	3,458	21.1
Delaware	372,559	378,461	24.6	5,535	27.1
Elk	26,198	31,916	35.5	415	16.8
Erie	188,643	208,717	29.9	3,352	18.5
Fayette	107,749	131,261	21.3	1,688	26.5
Forest	4,461	6,161	59.4	91	24.4
Franklin	90,250	122,934	31.5	1,694	23.0
Fulton	10,504	15,729	79.9	322	31.5
Greene	27,105	32,713	40.5	479	28.3
Huntingdon	31,384	41,474	35.0	550	28.9

	Licensed Drivers	Registered Vehicles	Daily Miles Traveled per Registered Vehicle	Vehicle Crashes	Mean Travel Time to Work (minutes)
Indiana	60,940	78,097	29.5	993	23.8
Jefferson	34,405	44,061	37.1	580	22.3
Juniata	15,355	22,783	34.3	269	32.6
Lackawanna	141,199	154,445	32.7	2,807	19.8
Lancaster	315,265	396,847	25.9	5,773	21.7
Lawrence	72,316	86,172	24.6	1,111	21.3
Lebanon	87,372	110,731	27.2	1,547	21.8
Lehigh	202,205	235,193	32.2	4,781	22.1
Luzerne	219,565	270,535	28.1	4,012	21.2
Lycoming	82,972	118,126	27.0	1,294	19.6
McKean	31,591	37,818	31.1	481	20.1
Mercer	84,221	104,290	32.5	1,744	19.6
Mifflin	29,394	37,906	31.1	502	22.1
Monroe	101,120	120,990	33.3	2,447	36.7
Montgomery	569,855	724,695	24.7	10,022	26.5
Montour	13,107	16,991	44.7	218	19.7
Northampton	206,950	246,093	21.2	3,037	24.2
Northumberland	66,180	86,304	24.8	830	23.4
Perry	33,139	47,190	34.8	574	34.7
Philadelphia	672,230	573,211	26.5	15,197	32.0
Pike	30,144	36,163	43.4	537	46.0
Potter	13,511	17,919	39.6	193	23.2
Schuylkill	104,061	131,671	29.6	1,876	24.9
Snyder	25,745	35,457	32.8	458	22.0
Somerset	58,523	76,912	38.3	976	22.9
Sullivan	4,964	6,876	39.1	100	25.3
Susquehanna	29,773	38,247	41.3	550	26.2
Tioga	28,727	37,390	41.2	475	23.1
Union	25,729	34,799	40.8	422	20.0
Venango	39,384	48,726	34.5	813	21.2
Warren	30,885	38,038	33.5	478	19.6
Washington	149,480	176,124	35.1	2,315	25.6
Wayne	44,393	57,810	20.1	683	26.3
Westmoreland	263,831	303,936	32.6	4,336	25.4
Wyoming	23,324	31,535	24.4	383	26.2
York	274,023	348,943	24.1	4,777	23.9

Source: Pennsylvania Department of Transportation, 2000. "Mean Travel Time to Work" data are from the U.S. Census Bureau.

Terms used

Miles of highway – Linear miles of road regardless of number of lanes. The length measured along the road centerline.

Daily Vehicle Miles of Travel (DVMT) – A measure of total travel by all vehicles.

PA Department of Transportation (PennDOT) Roads – Roads owned and maintained by PennDOT.

Sources

Rural counties are defined as those whose population is more than 50 percent rural according to the 1990 Census, the current definition at the time of the research. Unless otherwise noted, data come from the Pennsylvania Department of Transportation (PennDOT) and are for the year 2000.